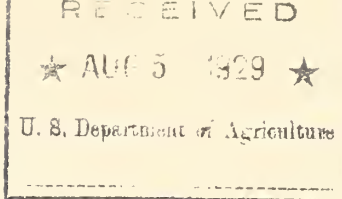


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THE PLANT DISEASE SITUATION.

A dialogue between Mr. F.C. Meier, senior plant pathologist, Extension Service and Mr. Morse Salisbury, Chief of Radio Service, delivered through WRC and 31 other stations associated with the National Broadcasting Company at 2:00 p.m., E. S. T., Tuesday, July 23, 1929.

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QUESTION: From time to time in the course of these daily broadcasts you have heard from Department of Agriculture men who study the diseases of plants and ways to control them. One of the most frequent visitors has been Mr. F. C. Meier, extension plant pathologist of the Department. Mr. Meier is in touch with some 600 plant pathologists in the United States. He probably would disclaim having any such extensive knowledge, but actually, from his field trips throughout the country, he can give you one of the best birdseye views of the plant disease situation that you will get anywhere. He is just in from over three months' field work. So once again I have prevailed on him to leave his reports and correspondence and test tubes to give you the latest news from the battle ground where scientists and farmers are waging war against plant diseases.

Will you start, Mr. Meier, with a summary of the wheat smut situation as you saw it in the winter wheat States?

ANSWER: On the whole, Mr. Salisbury, wheat smut is giving way to the copper carbonate seed treatment. This year, due to the use of this simple inexpensive dry seed treatment, many thousands of farmers are harvesting more wheat to the acre-- wheat which will sell on the market without a smut discount. Considering the fact that in 1917 this treatment was unknown to farmers in the United States, its popularity is little less than marvelous. There is a good reason for this-- tests by the Department of Agriculture, the State experiment stations, and by farmers themselves have shown that copper carbonate brings results. Marked progress is also being made in the development of smut resistant wheats and this is a matter of importance to growers in certain western States, where due to soil infestation, seed treatment does not give complete control.

In many sections of the wheat producing area the situation is similar to that in Juab County, Utah, where County Agent Smith reports that practically all seed grain for the 1928 crop was dusted. County Agent Dickenson of Shenandoah County, Va., is here with us today and he tells us that you farmers who used so much copper carbonate last fall have very little smut this year.

The latest development in connection with seed treatment in California, Oregon, Washington, Utah and other Western States is the use of combined treating and cleaning machinery. A portable cleaner and treater proved so satisfactory in San Luis Obispo County in California that similar outfits were operated last season in other sections of the West. This year more portable equipment is being built. Here and there stationary outfits are also operating where seed wheat may be cleaned and treated for the entire community.

Yes, winter wheat growers that I talked to this spring feel that they are getting the best of smut. The present danger lies in over-confidence. We should treat our seed grain carefully every year, and now-- just following harvest-- is the time to prepare for this work.

QUESTION: That's encouraging, Mr. Meier. Now, just for the benefit of a good many of my city friends who have put one question to me, I would like to put it to you. Here it is: Why not let plant diseases take their course and thus cut down the over-production that piles up price-cutting surpluses?

ANSWER: That is a very natural question. Of course, the point is, it costs about the same to produce a diseased crop as a healthy one and the outcome is more uncertain. Losses in the field, the orchard, and the truck garden by plant diseases mean a waste of land, labor, fertilizer, seed and almost everything that goes into the cost of production. Purposeful limitation of yield is one thing, while leaving the matter to chance invasion of fungi or bacteria is quite another. Moreover, many plant diseases not only act to reduce yield but cause blemishing of the harvested plant products. Sometimes wastage results in storage and on the way to market. Disease control makes possible a more certain income, hence a smaller acreage can be relied on to produce a given crop.

QUESTION: Well, to get back to the actual plant disease situation, I understand you looked over black rot conditions in the New Mexico sweet potato storage houses. Are they making any progress there in the control of black rot and do their findings have any value for eastern potato growers?

ANSWER: The sweet potato growers of Virginia with whom I spent some time in February would have found it interesting to be with me at Portales, New Mexico, the latter part of March. The sweet potato growers got together in the court house just at the time they were getting ready to bed the potatoes. To my interest, I found that growers in that section have one great problem (black rot) in common with you men who are growing sweet potatoes in the East and Southeast. As a matter of fact, in 1928 black rot was fairly generally distributed over the sweet potato growing sections of the southern United States. The high percentage of field infection of course led to heavy losses in storage, many houses having 10 to 25 and even higher percentages of this disease. In some of the eastern States the situation was so acute this last winter that farmers conducted a vigorous campaign to control and eradicate black rot from the territory. A similar program was put on this spring in New Mexico under the leadership of Mr. Quisenbury, the Extension Agronomist. I am told by Dr. L.L. Harter, authority on diseases of this crop, that black rot is one of the easiest diseases to eradicate. By the exercise of sanitary measures such as the use of clean seed beds, careful selection of seed potatoes, seed treatment with mercuric chloride and crop rotation it can be eliminated from the crop within a couple of years. Last season growers in southeastern Missouri informed us that efforts towards eradicating this disease were meeting with excellent results in that territory.

QUESTION: For eating purposes sweet potatoes and Irish potatoes are pretty closely associated in my mind and that inspires me to ask you about the present status of the virus diseases of potatoes. We have been hearing a lot about these in recent years. Do you find any headway being made on this problem of potato growers?

ANSWER: There is no question, Mr. Salisbury, about progress with the virus diseases of potatoes. A few years ago many growers who realized that their seed stock was "running out" did not know that this is due to the presence of such diseases as mosaic, leaf-roll and spindle tuber. The situation is quite different now. Almost any progressive grower of table stock recognizes these troubles and realizes that they can be avoided only by purchase of seed stock harvested from plants which were known to be relatively free from disease. Countless demonstrations of increased yield resulting from the planting of such inspected or certified seed have led to an appreciation of its value.

By the way, speaking of potatoes, if our friends in the West will pardon us for a moment's digression, now is the time for you growers who are listening in on Springfield and Boston to be watching out for late blight. While the disease has been slow in putting in an appearance in the Northeast this season, it may still show up, particularly if we have a spell of cool, rainy weather. It is a good plan to continue with the Bordeaux spray or dust. If you haven't planned to use this, it would at least be well to be prepared to apply the fungicide in case the disease should show up. Only a few days of late blight are required to bring about low yields and late blight tuber rot.

QUESTION: Our time is about up, Mr. Meier, but I know the truck crop growers are hoping that you will tell us something about work under way on their particular plant disease problems.

ANSWER: Mr. Salisbury, I wish there were time to tell of research and extension work on truck crops in different sections of the country. The development of disease-resistant melons, lettuce, cabbage, and tomatoes; experiments on the production of western bean seed free from bacterial blight and anthracnose; studies of improved seed treatments, sprays and dusts; these and many other projects now under way give promise of increased profits to growers and better quality products in the city markets.

